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AUGUST
1955

Rural Lines

Electrification Section



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A Message from the

ADMINISTRATOR

In recent weeks we have heard a good deal of talk about the so-called Hoover Commission report. Some of it reveals misconceptions, both with regard to the report and to REA's position.

To make our position clear we compiled an analysis of the report and this we have sent to our borrowers because of the many questions that have been asked of us.

Briefly stated, the conclusion we came to was this: If the Hoover Commission's recommendations with regard to REA were adopted, we would be unable to accomplish the objectives in rural electrification and rural telephony which have been established by the Congress.

This is not to pass judgment on the overall work of the Commission because we all know that an impartial look at the operations of government is most desirable. REA should be no exception. But, as was suggested by Attorney General Brownell in his dissent to the report of the Commission, we feel that the recommendations concerning REA were made without enough study "to determine the effect which such a recommendation would have on the Rural Electrification Administration." This is unfortunate because an opportunity was passed up.

The recommendations do bring to mind the obligation that rests with all of us—with the directors of the rural systems as well as with the REA staff—of being constantly on the alert for ways and means of strengthening and bettering the program. The desirability of gaining freedom from complete dependence on Government must keep us ever on the alert to uncover ways and means of building financial strength for our systems. This is a long-range objective to which we all can subscribe, and it is worthy of our sincere study and examination.

A handwritten signature in cursive script, reading "Arthur Nelson".

Administrator.

Iowa Members Go

"All Electric"

WAY up north in Iowa, near the Minnesota line, is the home of the Co-op Electric Company, with headquarters at St. Ansgar, Iowa. It is also the home of the "All Electric Farm" campaign which started in April of last year.

This is in the way of a progress report. The campaign, which has attracted national interest, has resulted in around 200 "All Electric Farms" out of the 2,763 consumers served. Average kwh consumption was 388 in March of 1954 and 500 in March of 1955. Manager Louis J. Vandermyde credits the stimulus and interest created by the campaign with having a great deal to do with the increased load.

Mr. Vandermyde says, "We needed something to dramatize rural electricity, something which would spark member interest and encourage them to make full use of their power. Ed Callen, our former power use adviser who is now manager of the Park Rapids Rural Electric Cooperative in Minnesota, is entitled to the credit for the 'All Electric Farm' idea.

"We had two things in mind. First, to increase load and, second, to stir up interest in re-wiring. Our system has been in operation over 15 years and the matter of safe and adequate wiring was getting to be a problem.

"The 'All Electric Farm' application blank requires that members permit co-op employees to inspect wiring and make recommendations for any corrections which may be needed. The application also affirms that the following appliances are in operation: Electric range, electric water heater, pressure water system, electric refrigerator and electric washing machine.

"Each member who qualifies is awarded a large metal sign with his name on it showing that he operates an all electric farm. The response was much greater than expected. Some members even bought a couple of appliances so they could qualify. Dealers saw the possibilities and have backed us up with an aggressive sales campaign. Interest has developed to the point where the 'All Electric

Farm' members have started their own organization. About 85 of them turned out for the first meeting and we have plans for a couple of trips to nearby power installations."

Vandermyde is understandably proud that many rural electric systems in other sections of the country have adopted the plan. He was a little embarrassed, though, when members of neighboring co-ops started writing him for "All Electric" signs. That moved the idea across Northern Iowa. Now Co-op Electric and 4 nearby borrowers are working out a cooperative power use program which will permit distributors, dealers and rural electric systems to work together in monthly promotions of selected appliances. Newsletters and newspaper advertising do the bulk of the promotion.

Tall, lanky Mr. Vandermyde has long been a community leader in his more than 15 years with

Co-op Electric. He started on the job at the stage where buying the poles was the first order of business. His even taller sons grew up in an atmosphere of 2-way radio and 3 a.m. coffee on blizzardy nights.

The area served by Co-op Electric's 1,020 miles of line is one of diversified agriculture featuring Iowa's famed corn-hog economy. Increased activity in chicken and pig brooding has helped in load building.

As a sample of what consistent power use promotion can do, there are around a thousand pressure water systems on the line.

Good public relations has helped, too. Where you turn off the highway on the gravel road leading to St. Ansgar, the town sign bears the legend, "Lighting supplied by the Co-op Electric Company."

Members feel that the co-op has lighted the way in a variety of fashions.



First "All Electric Farm" sign installed at the Royal Neeley & Sons farm northeast of St. Ansgar. Left to right, Board Member Irving Winer; Manager Louis J. Vandermyde; Royal, Jean and Bill Neeley, farm operators; Board President Allert Olson, and Secretary Clarence Biederman. Mike Neeley, 4, stands in the front.

You've Been Asking About . . .

CPA's and Audits

Directors and managers have been asking REA for advice and guidance in selecting an auditor. The questions vary from "Should we ask for bids?" to "What can we expect for our audit money?"

Here are some of the questions most frequently asked, with their answers:

1. Should we ask for bids?

It is not customary to ask CPA's for bids. Like doctors, lawyers and engineers, Certified Public Accountants are professional men. The professional code of the American Institute of Accountants discourages its members from submitting bids, as such, on an audit assignment. If you were in need of a lawyer for a complicated legal case, you would not ask several lawyers for bids. Instead, you would try to find the best lawyer available with experience in the type of action involved. So with a CPA, you would not ask for bids, but try to find the best available for your needs.

2. What should we look for in selecting a CPA?

You should check reputation, experience, and availability to do the job when you want it; cost is only one factor to be considered. There is no reason why you as a director or a manager should not make inquiry to find the CPA best fitted to do your type of audit, the daily rates, and an estimate of the time needed to complete your audit.

3. What should the audit include?

The board should agree beforehand on what services it expects the auditor to furnish. Certainly your auditor should provide a comprehensive report giving his informed opinion on the fairness of the balance sheet and statement of operations. This should include appropriate comments on the operating results, comparing those results with preceding years, and expressing an opinion on the adequacy of internal control.

The scope of the audit need not be limited to the minimum requirements prescribed by REA (Bulletin 185-1, July 1952). You may well desire additional reports, such as an application-of-funds statement, or a special report and study of the adequacy of the depreciation reserve. The scope should be broad enough to fit your particular needs.

4. How much should it cost?

REA borrowers have paid from around \$300 to \$3,000 for audits, with \$800 as the approximate average. However, what one system pays is not necessarily a guide for another, since each has its own special requirements and conditions.

5. What governs the cost of an audit, or how can we tell if we are getting our money's worth?

The cost of an audit is related to the volume of work, which depends mainly on these points:

(a) *Scope of the audit.* Naturally, the more extensive services and reports you request, the more time and work are involved, and the more the cost.

(b) *Condition of the records.* This has much to do with the amount of testing and detailed checking necessary to form an opinion regarding the cooperative's statements. The auditor will be required to do less work if the subsidiary records are accurately and currently maintained than if such is not the case. The borrower may save much audit time and money by maintaining a good filing system where data supporting book entries are readily obtained for verification.

(c) *Period under review.* REA asks that an audit be made every 12 months. If a borrower lets the period run longer than that, the cost will be more. It takes more time and work to perform an audit for a period of 18 months than for 12 months.

(d) *Number of accounting*

transactions. Naturally the cost of an audit will be more for a period when many work orders are involved than for a period of light construction. Also a borrower with, say, 10,000 members would require more auditing time than one with half that number. The more work, the more cost.

6. What is the value of an audit to me, as a director?

It serves as another and extremely important check on the management stewardship of a rather specialized type of business activity. In any business where ownership and management are not identical, it is important for you as a trustee to utilize all standard methods for appraising management performance.

When you get your audit, remember that it was made not just to meet legal and financial requirements. You can get real benefit from your audit investment if you use the audit report in evaluating your past operations as a guide in planning for the future.

Kind Words

The Board of Directors of the Glacier County Electric Cooperative, Cut Bank, Mont., recently passed a resolution commending REA on the new type of operating and financial statement. They say it is designed so "the average man may understand it."

Speakers On Atomic Energy

Help in locating experts who can speak on atomic energy subjects is available to REA from the Atomic Energy Commission.

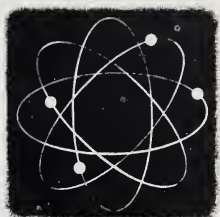
With many rural electric system officials asking what the picture is in the potential commercial use of atomic energy for power, REA sought AEC's assistance in obtaining speakers as well as informational material. Selected leaflets will be listed by RURAL LINES in future issues.

If you are in need of a qualified speaker for a state meeting on the application of atomic energy to industrial uses, contact REA as soon as possible.

ARMY ENGINEERS

TO

STUDY NUCLEAR PLANT



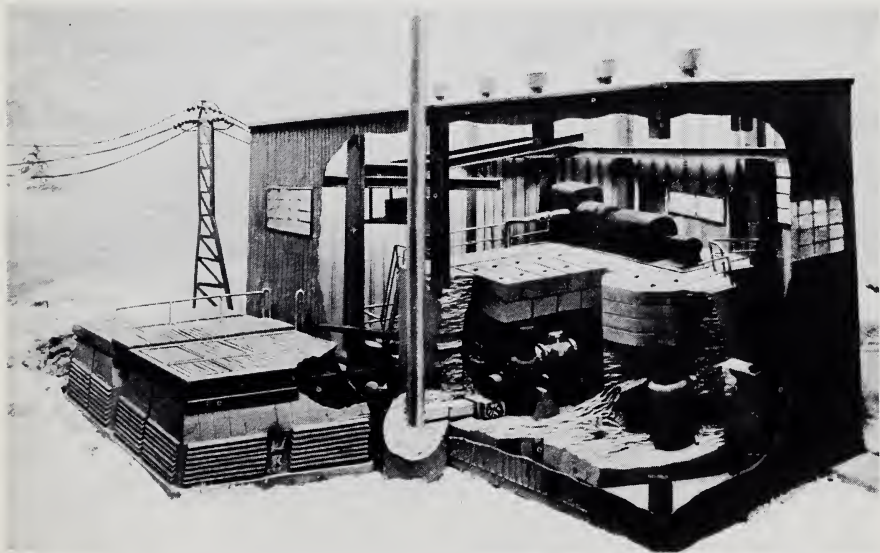
AN experimental nuclear power plant soon will be built and tested at Fort Belvoir's Engineer Research and Development Laboratories, located about 20 miles south of Washington, D. C.

The plant is a pressurized-water type with a capacity of 2,000 kilowatts of electricity. It is designed solely for electric power utility and heating purposes. The heat of its reactor will be used to produce steam which will drive a standard turbo electric generator. The fuel will be highly enriched uranium, containing a greater concentra-

tion of fissionable uranium-235 than occurs in natural uranium.

The prototype will provide construction, operation and maintenance data and will demonstrate capabilities and limitations of such a plant.

The plant at Fort Belvoir will be constructed and test operated by the American Locomotive Company under the supervision of the Army Engineers and the Atomic Energy Commission. It is being developed for possible use at remote bases to eliminate the need to transport bulky conventional fuels.



This is cutaway model of nuclear power plant to be built and tested at Ft. Belvoir.

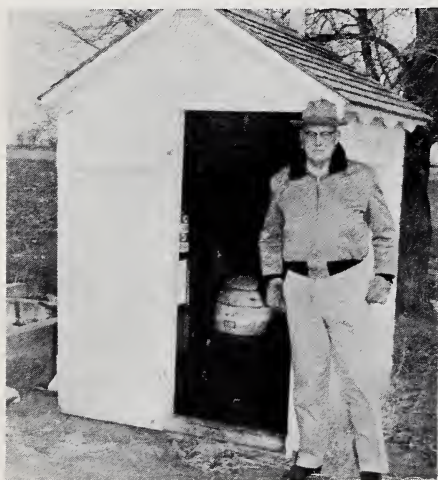
IRRIGATION PUMPS *by the Hundreds*



WATER MEANS PROSPERITY IN PLATTE RIVER VALLEY

FOR a hundred miles or more there's a belt of farm prosperity stretching up and down Nebraska's Platte River Valley. The reason for the prosperity is the 1,400 irrigation pumps served by the Dawson County Public Power District.

This REA borrower hooked up its first irrigation pump in 1938 and now it is a rare day, May through July, when less than a dozen new applications for pump service show up at the office.



Fred H. Wallace, a Dawson director, shown in front of his irrigation pump house. His pump has operated 15 years without costing a cent for repairs.

But it is not just the number of pumps that is increasing; use of power is jumping, too. In 1951, the pump load was around 2 million kwh. This year it is expected to top 11 million kwh.

Irrigated land, if you find any for sale, sells at a minimum of \$425 an acre. Unirrigated acreage occasionally sells as high as \$100 an acre.

The town of Cozad, a short distance from the District's headquarters at Lexington, bills itself as the alfalfa capital of the world. Farmers average 5 cuttings of alfalfa a season on irrigated land. Dawson County alone produces some \$10 million worth of alfalfa a year.

Between the mowing machines in the field and the alfalfa processing plants, the distinctive musty odor of alfalfa fills the air day and night. If you like the smell of alfalfa it's fine. If you happen to have hay fever, it's the last place in the world for you.

Since the pump load is seasonal — May through August — the Dawson District promotes other uses of electricity to get year-round balance. The monthly kwh

average, not including the pump load, is around 300. Careful planning and sound engineering have enabled the system to keep the situation in hand.

Manager Edward T. Koza recalls that there were times when it was touch and go in a dry season when demands for pump service reached a peak. An emergency power ration plan was developed but never was needed. And there were times when the line crew was ready to fan the substations with their hats.

The success of pump irrigation in this north-central section of Nebraska is due somewhat to the fact that the Platte is occasionally an upside-down river. In some months, the river is a sand bed. Under the river bed are great deposits of sand and gravel, sometimes reaching a depth of 100 feet. This is the storage vault for the water run-off from the 100,000 square mile drainage area. The water level, instead of dropping, is rising. At Lexington, for ex-

ample, it has risen 10 feet in the past half century.

Even though the Dawson District powers water to irrigate around 200,000 acres, no one is worried . . . the Platte has water in the bank.

Out of some 18 years of experience with irrigation, the people around the Dawson District have had the opportunity to see this section of the Platte Valley blossom into prosperity. Irrigation makes possible record yields of corn, alfalfa, potatoes, sugar beets and silage crops. When pump 100 was connected, it was christened with water from pump number 1. When they reached pump 1,000, everyone was too busy for a ceremony.

C. A. Palmer is one of the District employees who has had a continuing hand in the irrigation program and is helping farmers make the most effective use of their water. As each pump goes



Nebraska prides herself on being called the "Cornhusker" state. The tall corn of the Platte Valley gets that way because of electric pump irrigation.

on the line, a file is set up for it and farmers are encouraged to study the yearly records of pump flow and kwh.

Mr. Palmer is convinced that farmers get the best crops when they soak the soil enough to insure that there is water below the longest roots of the growing crop.

Farmer experience with potatoes and beets helped to get wider acceptance of the practice. Fall irrigation to provide a water hold-over to spring planting time is another practice which is paying off in dollars for the farmer and an extended pumping season for the District.

PIONEER

Back in 1937 and 1938, J. H. Henry spent much time and effort in getting signers for rural electric lines in the rural areas around Natchitoches, La. Mr. Henry and others interested in the development of rural communities, organized the Valley Electric Membership Corporation, with headquarters in Natchitoches in the central part of Louisiana.

Mr. Henry became the first president of the board of directors and, with the exception of 2 years, has headed the board ever since.

Today, his dream is almost realized as the rural electric system he helped start now serves 14,000 consumers over 3,200 miles of line in remote areas as well as prosperous, thickly settled communities.

Mr. Henry, who was born in 1897 on the cotton plantation where he now lives, manages the Henry Estate, known throughout Louisiana and the South as Melrose. The old plantation home, including the slave cabins, was restored a few years back, and today houses a collection of books famous throughout that section of the country.

A community leader, Mr. Henry



J. H. Henry

has served his neighbors in many capacities other than in rural electrification. These have included cotton and pecan producers groups, and farmer cooperatives.

"The rural electrification program has been one of the most beneficial endeavors in our history toward promoting prosperity and a better way of life for our rural population," Mr. Henry says. And he backs up his views by his energetic efforts in the program and his promise to keep on working to insure its continued success.

POWER USE EXCHANGE



Electrical dairy farming gets a strong boost in General Electric's new dramatic color film, "Farm Family American." Every member of the family will enjoy this picture which makes a strong case for electrical feeding and feed handling equipment, hay driers, milk pipelines, and barn cleaning equipment. The 27½ minute film is available through your nearest General Electric Company office.

Last year the **Grand Electric Cooperative**, Bison, S. Dak., made Section 5 funds available to 105 consumers. During the first 3 months of 1955, these consumers increased their kwh consumption by 57 percent over the same 3 months in 1954. During this same period the entire project increased its consumption 18 percent over the same period in 1954. The 105 consumers added 58 home freezers, 7 electric ranges, 10 water heaters, 10 water systems, 15 clothes driers, 12 refrigerators, 17 washing machines, 4 electric welders, 4 electric drills, 2 ironers, 4 sewing machines and 1 vacuum cleaner.

Electric cooperatives serving Polk, Marshall and Kittson counties in Minnesota are sponsoring a perpetual award program in the 4-H Farm and Home Electric proj-

ect. The winning boy or girl in each county will receive merchandise valued at \$25. Project work, demonstrations, leadership and exhibits of project work will be considered in choosing the winners. The sponsoring co-ops are Roseau Electric Cooperative, Roseau; Red Lake Electric Cooperative, Red Lake Falls; Red River Valley Cooperative Power Association, Halstad; and P.K.M. Electric Cooperative, Warren. The program is being coordinated by the P.K.M. co-op under the direction of Paul A. Edman, electrification adviser.

COMING . . .

The Second Annual Inter-Industry Farm Electric Utilization Council National Power Use Workshop will be held in St. Louis, Mo., November 28-30, 1955. There will be two solid days for roundtable and workshop discussion of topics suggested by participants. Invitation to participate together with program details will be sent to state electric power use councils, rural electric borrowers, electric companies, national and State industry associations, manufacturers, distributors, dealers, electrical contractors, farm and trade publications, and farm organizations and agencies.

FROM DESERT PALMS

NEW RURAL SYSTEM SERVES REMOTE CALIFORNIA AREA

IN REA's 20th year, Anza Electric Cooperative energized its lines this summer and became the newest REA borrower to distribute rural power.

Where's Anza? That's a good question. It's a southern California community about 200 miles southeast of Los Angeles, but you won't find it on most maps. No railroad or bus line comes within 60 miles, and there is only 1 telephone—in the combined post office and general store.

For months the office was located in a room of Manager Fred C. Holland's home. When an office manager was employed, the staff moved to a 1-room frame building which has a total capacity of the 3 on the staff and 2 thin visitors. On days when the telephone line happens to be working, obliging school children relay the messages from the general store to the co-op office.

But if the Anza co-op and its headquarters are small, the effect

of the rural system on the community could only be described in Hollywoodese as fabulous. Talking to members, an open-mouthed visitor begins to wonder whether these blocks of split-level ramblers, paved streets and sprawling industrial buildings are today's reality or tomorrow's dream. For example, some ranch land purchased at \$5 an acre 10 years ago is selling at \$100 an acre.

Central station electricity made the difference. Anza members fall into four general classifications: (1) Farmers in the Terwilliger Valley, (2) ranchers on the mesa and mountain sides, (3) retired couples, and (4) week-end vacationers everywhere.

For the most part, farmers raise alfalfa and similar feed crops to sell to the ranchers. Irrigation takes farming out of the gamble class.

Climate and scenery are the big attractions for the retired and the vacationers. The light, dry air is



This is a typical seasonal home served by the Anza Electric Cooperative.

to

MOUNTAIN PINES



a boon to asthma sufferers and a rush of new settlers is anticipated now that modern electric living is available.

A few weeks before the lines were energized, dealers from 6 towns in a 100-mile radius of Anza, filled the Anza Community Hall with a sparkling display of electrical goods and appliances. Members got an eye-full of competing lines as well as practical instruction in adequate wiring. A bemused appliance salesman provided the best picture in the hall. He was fascinated by a wooden ice-box. It used real ice chunks for cooling.

Recalling the early days of rural electrification, you might think that things around Anza were still in the pioneer stage. That's not quite the case. Enough alternative sources of energy and fuel had been developed so that rural people could get by with a reasonable degree of comfort. But cost became important. The average bill for alternative fuels and lighting in household use alone for farmers was running around \$40 a month. Central station power is expected to cut this cost greatly.

More important are productive uses of power for farmers and ranchers, and comfort and conveniences offered retired couples and the family with a week-end cabin. Since Anza is within 3 to 4 hours driving time of some 4 million people, it appears that pastoral peace and quiet are of the past.

When the Anza co-op got into operation, it served around 320 consumers over 140 miles of line. Some 14 miles of transmission line connect the system at Mountain



This windmill is a reminder of the pre-electric days at Anza, Calif.

Center with the facilities of California Electric Power Co.

Getting to Anza at an altitude of 4,000 to 5,000 feet in a section of the San Jacinto Mountains can best be described as an eye-popping experience.

The traveler comes from palm sprinkled desert country below sea level where cactus plants are as big as a barrel, through gold-tipped orange groves, red-tinted cherry orchards, rows of graceful, soft green olive trees and then into English walnut orchards. One approach through the National Forest takes you along pretzel-shaped roads through the pines to bare peaks of raw rock. The higher peaks wear ice cream caps of snow, even in late summer.

Coming down from the higher altitudes along the route paralleled by the transmission line, you come to plateaus and slopes covered with fat beef cattle, then

gradually approach the almost hidden valleys where the rich, sandy loam needs only water to produce like mad.

In addition to Manager Holland, who formerly managed a rural electric system at Alturas, Calif., the staff includes Thomas L. Crooks, office manager, and Harold Harden, lineman. The latter formerly worked on an Oregon system and is still a little dazed by the change in scenery.

Anza, like many other systems, required a lot of work and time to become a reality. The newsletter, now in its 4th year, keeps members advised of progress and developments. Some of those who pioneered in the development of the system include: Mrs. Georgia Kerr and Messrs. William Bradford, Rupert Costo, Arthur Nightingale, Howard Bailey, George Hepburn, C. A. Robertson, R. C. Jackson and Homer Sherrod.

The Anza newsletter for April, 1953, had this ray of hope for the members: "The time has come when we will soon be warning the babies not to stick hairpins in the wall sockets and screaming at everyone to turn off the lights to cut down on the monthly bill.

"We have all been so used to the old coal-oil lamps, the hot, hissing lanterns, the sputtering 'pop-bang' of the light plant, and that constant worry of running out of fuel that it is hard to imagine having electricity all over the place, for the operation of television, washing-machines, irons, jet-pumps for water pressure, hot water heaters, radios, and many other things."

William P. Nixon Dies

William P. Nixon, head of the loans section in REA's Electric Operations and Loans Division, died May 27, following a short illness. He had been a member of the REA staff since September 1938, and at one time was head of

Region 7 in the old Applications and Loans Division. This region included the states of Colorado, Kansas, Nebraska and Wyoming.

Mr. Nixon was born in Brunswick, Md., on March 26, 1895, and attended school there.

THE LINEMAN

TRAINING CUTS ACCIDENT RATE ON TEXAS SYSTEM

Once workers of Upshur Rural Electric Cooperative, Gilmer, Tex., had such a rash of accidents they drew a 27 percent penalty on workmen's compensation insurance.

Today the Upshur co-op is just about as safe a place to work as there is in Texas. Instead of a penalty, workers have earned through safety and first aid training a 9.1 percent credit on the co-op's insurance rate. Workers are on their way to their 200,000th accident-free hour.

Upshur took a big step in cutting accident and insurance rates

3 years ago when it began participating in the Texas Safety and Job Training Program and joined with the Texas statewide in promoting safety among office and outside plant personnel.

Safety training began with monthly and later semi-monthly meetings planned by Manager L. J. Johns and the State safety director. Meeting topics covered such practical subjects as the use of rubber gloves, proper grounding of lines, driving habits and equipment and tool inspection.

After a year of instruction, the men decided to continue training



Everybody gets into the act as Gilmer crew studies first aid.

and set up their own safety program. A chairman and secretary were elected and the workers planned a series of regular instruction get-togethers.

Training topics dealt with the workers' day-to-day occupational problems. For example, the class reviewed and discussed accidents or near accidents and decided how they could have been prevented. They also agreed on the safest way to handle risky jobs. Top safety experts were speakers and included safety instructors from insurance companies and local fire and police officials.

Some 26 Upshur employees completed first aid training under Gilmer Volunteer Fire Department instructors and were awarded Standard and Advanced First Aid certificates.

Manager Johns and the board of directors of Upshur co-op have high praise for the training program the workers initiated.

Says Mr. Johns, "Our workers have done an excellent job in cut-

ting down accidents and in training themselves for any emergency—highway, home or occupation accidents. We believe our co-op is the first REA borrower or utility in Texas to join the highway mobile assistance program. They use the co-op's two-way radio to relay calls for help.

"Our safety crew also has an important job in the 7th Civil Defense Unit of Upshur county. The men are ready for anything—tornadoes, explosions, fires or other major disasters—in this area.

And Chief Royce Hogg of Gilmer's Volunteer Fire Department who helped train the workers, explains, "They were the best first aid class and the most interested listeners we've ever had.

"The co-op's first aid specialists are spread over most of the area. Should disaster or major emergency come, the co-op first aid crew will be one of the first on the scene. We know Upshur will do a good job when called on, whatever the emergency may be."

Frank LaMaster

Frank LaMaster, 55, head of REA's Job Training and Safety Section, died at Washington June 13, following an operation.

He had been with REA since 1945 and was the originator of The Lineman. Mr. LaMaster was born at Marion, Ill., and went to school there. He is survived by his widow and a daughter, Mrs. Virginia Evans.



Demonstrations Pay

... Montana system is still getting returns from early power use program.

FOR a system with a population density of $1\frac{1}{4}$ members a mile, Hill County Electric Cooperative, Havre, Mont., has achieved a good record in building high average power consumption on the lines.

Electric power consumption on grain and livestock ranches has been growing steadily since the system was energized in June 1947. Today ranchers use an average of 450 kwh a month. Only 88 of the system's 1,500 farmer members are minimum users.

Homes in the thinly settled area are surprisingly well equipped with kitchen and home appliances, due in large measure to the co-op's power use activities.

Let the manager, Harold C. Ebaugh, tell about it.

"We believe," says Mr. Ebaugh, "that the 50 demonstrations and meetings conducted for farmers, ranchers, 4-H Clubs and other groups from 1947 to 1950 aroused a lot of interest in electrical appliances and equipment.

"We showed farmers how to wire properly for various appliances. We aimed to give members an all-around schooling in rural electrification. And with their wiring problems worked out, members began thinking about buying needed appliances.

"In 1952 we worked with Montana Power Company to get dealers to display home appliances at a 2-day Electrical Fair. Our co-op

and various merchants offered gifts to get the crowd out. This attendance-getting device must have worked because more than 3,000 turned out to see the displays.

"The Electrical Fair produced sales for dealers. In fact, one dealer reported selling 3 complete all-electric kitchen sets. The Fair idea turned out so well we're considering staging another."

Today with a good saturation in home appliances, Hill County Electric can look forward to power consumption gains from other uses of electricity. For example, the system supplies 15 electrically heated homes and 13 irrigation pumps.



Left to right, James Gordon, tabulating machine operator; M. F. Clancey, office manager, and Harold Ebaugh, co-op manager.

Spheres Mark Power Lines

Here is one answer to the problem of low-flying planes and power lines. Aluminum spheres, painted a bright international orange and installed on the power lines wherever they create a safety hazard, are clearly visible to a pilot.

Two REA borrowers in Ohio, United Rural Electric at Kenton and Lorain-Medina Rural Electric Co-op at Wellington, have installed these spheres at local airports. Rural electric systems have become interested in these spheres as a means of preventing service interruptions, as well as in the

safety factors.

"On numerous occasions service in the northern area of the co-operative has been interrupted due to broken conductors at one airport," reports Karl B. Crawford, manager of Lorain-Medina. He adds that pilots report fine visibility, especially on dark days, and appreciate the increased safety provided.

The spheres are about 24 inches in diameter and made from light spun aluminum. They come in two halves, with clips and fasteners, to simplify installation.



Special Editions for 20th Anniversary

Rural electric systems in Virginia are telling the story of the 20th anniversary of the rural electrification program with a specially prepared 12-page tabloid. Ten of the 12 pages are devoted to the REA story nationwide. The front page tells the story of the local rural electric co-op, and the back page gives information about others in the state. Many local newspapers are using the tabloid as a "rural electrification section" insert. Although the tabloid anniversary section idea was developed in Virginia, it is available to rural electricians throughout the nation.

For further information, write to Alex Hudgins, editor, Rural Virginia, 317 East Franklin Street, Richmond 19, Va.

“We Need Capital and Engineering”

CALIFORNIA INDEPENDENT PREDICTS A BRIGHT FUTURE

VARIOUSLY translated from the Spanish, Dos Palos means 2 trees, 2 sticks or 2 poles. If the Spanish surveyors who marked the land map were back in California's San Joaquin Valley these days they would be hunting for the phrase that means very many poles.

The poles, of course, would be those of the Dos Palos Telephone Company, an REA borrower which recently cut over to modern rural service. The company headed by Manager Richard D. Crowe, recently named president of the California Independent Telephone Association, serves 1,580 stations. Construction is being pushed to reach 400 additional applicants for service.

The Crowes are a telephone family. They have operated the Dos Palos system since 1930 and owned a system in Oregon prior to that.

The future of the Dos Palos



Richard D. Crowe

system looks bright. As is the case in many sections of California, the San Joaquin Valley area is growing by leaps and bounds. The system operates in a rich, irrigated country where rice, cotton,



Typical scene along lines of the Dos Palos Telephone Company.

dairying and melon crops are favored by rich soil and a favorable climate. Many farms are so large that farmers have their own radio telephone systems to keep track of operations on their own land. The shift of population is indicated by the fact that the Dos



Company's official symbol.

Palos system had 1,000 change orders in 12 months.

Some 8,000 people live in the 300-square-mile area the system covers. The rebuilt, modernized system is expected to reach the 3,000-station stage in about 5 years. The area is especially favorable for telephone operations. The flat valley lands offer few construction problems. Ice and snow are something people just read about in the papers. Violent storms are rare with occasional high winds offering the only weather hazard.

From the standpoint of rural service, the nature of farming—cotton, rice and truck crops which require seasonal and spot marketing—is a stimulant to telephone use. Irrigation is another, since water company headquarters are often in another section.

Manager Crowe thinks that telephone service needs to be sold and promoted. Take the telephone credit card, for example. Farmers find it convenient and have accepted the idea readily. Most of them travel a great deal and feel that the credit card saves them

time and trouble. And there's no limitation on the length of calls on the Dos Palos rural lines. Manager Crowe feels that those who make a great deal of use of the phone are excellent prospects for 1-party line service.

Because toll service is on the increase and is being heavily promoted, 2 operators will be on duty up to 10 p.m. with the unattended dial taking over from 10 p.m. to 7 a.m. The system now has 22 coin stations and is in the process of installing 15 more booths. Customer toll dialing is expected in this section of California in about a year.

The main problems of rural telephone systems as Mr. Crowe sees them are capital and good engineering. He says, "The REA telephone program has had a terrific impact on the whole industry. It has resulted in the development of alternative sources of credit, better engineering and better management. To a considerable extent it has brought about standardization of equipment. It has also helped to bring about much-needed research and thinking about the specialized problems of the rural telephone field.

"I am glad to see that REA is taking a more mature view of our problems. I have appreciated the advice and assistance offered.

"Everything has worked out better than I expected and I feel that REA financing is of definite benefit to us."

REAL Long Distance

One rural subscriber on the Dos Palos lines, farms 8,000 acres and is also an agricultural consultant to the Israeli government. In weeks when he does not commute to Tel Aviv by air, he does his consulting by long distance telephone.



"KNOW-HOW"

Speeds

RURAL DIAL SERVICE

BY LATE summer, the Scarbros, a smooth-running family team, which own the Powell Telephone Company, Powell, Tenn., expect to pass their 15-year estimate of 1,530 subscribers, more than 10 years ahead of schedule.

Achieving this goal marks another forward step for the company in extending efficient dial service to rural communities in Knox and Anderson counties. And it establishes Charles N. Scarbro, president, and his sons, Kenneth, vice-president, Charles, central office superintendent, and Willard, outside plant chief, as pacemakers among REA telephone borrowers.

The Scarbros did not exactly count on rural people signing up for service by "leaps and bounds." But that about sizes up the brisk

call for telephones in Beaver, Raccoon and Bull Run Valleys today. The company's service area is close to Knoxville and hard by the Oak Ridge atomic energy plant.

Some 495 subscribers were on the company's rolls when it applied for the first of 3 REA loans. The Scarbros figured about 170 more rural folks would sign by cutover time in October, 1952. However, news of the automatic dial system traveled fast among commuters and rural dwellers and it was a pleasant surprise when the cutover subscriber list totaled 845 names. On March 1, this year, the company completed its 1,200th connection.

What has it taken to triple the number of Powell Telephone's subscribers in less than 3 years? In



Broadacres Dairy, served by Powell Telephone, has 2 trunk lines, 5 telephone sets.

the case of the Scarbros, operational "know-how" rates high and seems largely to be the answer.

According to Mr. Scarbro, a Southern Bell Telephone Company veteran, "There's no substitute for 'know-how' in operating a telephone company." Kenneth Scarbro is also a long-time employee of Southern Bell and Willard and Charles, Jr., have gotten a thorough training in telephone techniques from their dad. You might say the boys have been climbing poles and fixing lines since they were "knee high to a grasshopper."

Powell Telephone started out as a farmer mutual company in 1902 with subscribers installing and repairing their own lines. Generally, line work took its turn after spring plowing and planting and the harvest was over.

As the years passed, subscribers saw their system go from bad to worse with more and more "down lines" strung along fence rows. By 1927 the number of "dues paying" members had shrunk to 40. Such was the sorry condition of things when leaders of the little company called on Mr. Scarbro to put the system in working order.

Scarbros Take Over

The new poles and magneto switchboard he put in improved service a lot and by 1930 there were 100 subscribers on the line. That was the year Mr. Scarbro leased the system and began making other changes. Five years later he purchased the company and expanded service to the communities of Heiskell in Knox and Edgemore and Dante in Anderson counties. In February 1951, he applied for a \$188,000 REA loan,

for modernization and further expansion. Two later loans totaled \$267,000.

The Scarbros say they have used only part of the loan money and that funds are available to serve 1,800 subscribers altogether.

Since the modern, flagstone and brick central office exchange unit was completed in Powell, the company has made service additions totaling 90 lines. With equipment to be received in August, 160 more lines will be added, making 560 in all.

Expect 1500 Subscribers

Thus the company expects to be able to serve more than 1,530 subscribers by late summer, a total that under calculated growth estimates had not been expected for 10 years or so.

Now it costs Powell Telephone between \$300 and \$400 per subscriber installation but with improvement of outside plant operations, this amount can be cut substantially, the Scarbros believe.

Where practicable, the Scarbros have found it profitable to join in



The Charles Scarbros, Sr. and Jr., look over connector switch blueprint.

pole use agreements. They have signed up for use of 1,200 poles belonging to Southern Bell Telephone Company in Knox county and Clinton Power Commission in Anderson county. "Much of our line is strung in rocky country," declared Mr. Scarbro, "so it paid us to go joint use."

Mr. Scarbro and his sons are sticklers for keeping company relationships with subscribers and residents along rights-of-way on the friendliest terms. Top service and good working contacts with rural people are the keys to building goodwill for all borrowers, they say.

John Norris is connecting drop wire to open wire circuit near Powell. →



■ A total of 157 REA telephone borrowers had cut over 553 exchanges to modern dial service as of June 30, 1955.

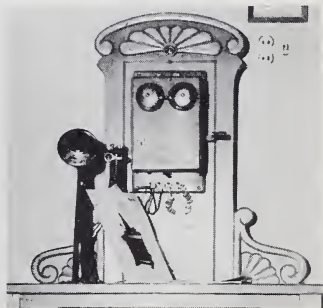
■ Telephone loans made through fiscal 1955 have brought or will bring new or improved service to more than a half-million farm families and other rural establishments.

■ In fiscal 1955, REA made loans to 79 new telephone borrowers, 55 of which were commercial companies and 24 rural telephone cooperatives.

Early Model

Can you identify this "pioneer" in the telephone industry? Do you still have similar reminders of the past in your own community?

This old pay station was part of a display of telephone equipment shown at the State Telephone Association meeting in San Antonio earlier this year. It is one of a collection owned by W. L. Wade of Houston.



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ELECTRIFICATION

\$ 300,000 Southeast Colorado Power
Association, LaJunta, Colo.
10,155,000 Colorado-Ute Electric
Association, Montrose, Colo.
20,000 Plymouth Electric Coopera-
tive Association,
LeMars, Iowa
50,000 Okanogan County Electric
Co-op, Winthrop, Wash.
6,624,000 Puerto Rico Water Resources
Authority, San Juan,
Puerto Rico
180,000 Fergus Electric Co-op,
Lewistown, Mont.
50,000 Vermont Electric Co-op,
Johnson, Vt.
890,000 Northeast Louisiana Power
Co-op, Winnsboro, La.
100,000 Sawnee Electric Membership
Corp., Cumming, Ga.
50,000 Broad River Electric Co-op,
Gaffney, S. C.
430,000 Talquin Electric Co-op,
Quincy, Fla.
637,000 Craighead Electric Co-op,
Jonesboro, Ark.
222,000 Twir. Valley Electric Co-op,
Altamont, Kans.
330,000 Bandera Electric Co-op,
Bandera, Texas
335,000 Wood County Electric Co-op,
Quitman, Texas
100,000 Northern Lights, Inc.,
Sandpoint, Idaho
680,000 Maquoketa Valley Rural
Electric Cooperative,
Anamosa, Iowa
190,000 Western Illinois Electric
Co-op, Carthage, Ill.

930,000 Canadian Valley Electric
Co-op, Seminole, Okla.
690,000 Southeastern Indiana REMC,
Osgood, Indiana
25,000 McKenzie Electric Co-op,
Watford City, N. Dak.
306,000 Tipmont REMC,
Linden, Indiana

TELEPHONE

\$ 310,000 Leaco Rural Telephone
Co-op, Lovington, N. Mex.
215,000 Range Telephone Co-op,
Ashland, Mont.
65,000 Southwest Arkansas
Telephone Co-op,
Texarkana, Ark.
149,000 Sherwood Telephone
Company, Merigold, Miss.
20,000 Colfax Telephone Exchange,
Colfax, Calif.
530,000 Rocksprings and Nueces
Canyon Telephone Company,
Rocksprings, Texas
313,000 Community Telephone
Company, Windthorst, Texas
1,300,000 Lycoming Telephone
Company, Pine Grove, Pa.
1,423,000 Allied Telephone Company,
Little Rock, Ark.
84,000 Levant-Kenduskeag Tele-
phone Corp., Levant, Maine
185,000 Elmore-Coosa Telephone
Co., Eclectic, Ala.
70,000 Hancock Rural Telephone
Corp., Greenfield, Ind.
364,000 Breezewood Telephone Co.,
Breezewood, Pa.
525,000 Central Virginia Telephone
Corp., Amherst, Va.